

**ORIGINAL**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Raymond J. IANNUZZELLI	§	Confirmation No.:	6896
Serial No.:	09/981,511	§	Group Art Unit:	2833
Filed:	10/17/2001	§	Examiner:	E. A. Leon
For:	Interposer One-Step	§	Docket No.:	200302186-1
	Load And Self-Lock Socket	§		

**APPEAL BRIEF**

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Date: January 27, 2004

Sir:

This Appeal Brief, and concurrently filed Notice of Appeal, is in response to the Final Office Action dated December 11, 2003.

**I. REAL PARTY IN INTEREST**

The real party in interest is the Assignee, Compaq Information Technologies Group, L.P. (CITG). CITG is a wholly owned subsidiary of Compaq Computer Corporation. Compaq Computer Corporation has recently merged with Hewlett-Packard Company.

**II. RELATED APPEALS AND INTERFERENCES**

None.

**III. STATUS OF THE CLAIMS**

Originally filed claims: 1-20.

Cancelled claims: 10 and 14-19.

New claims presented: 21-30.

Thus, claims 1-9, 11-13 and 20-30 are pending, and all the pending claims stand rejected.

**IV. STATUS OF THE AMENDMENTS**

There were no after-final amendments.

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## V. SUMMARY OF THE INVENTION

Various embodiments of the invention are directed to a restraint system that mechanically and electrically couples an electronic device (e.g., a microprocessor) to a socket on a circuit board. *Specification* Paragraph [0023]. In some cases, the restraint system may hold other devices in contact with the electronic device, such as a heat sink. *Id.* Applicants' informal drawing Figure 8 illustrates exemplary embodiments and is reproduced below for convenience of the discussion.

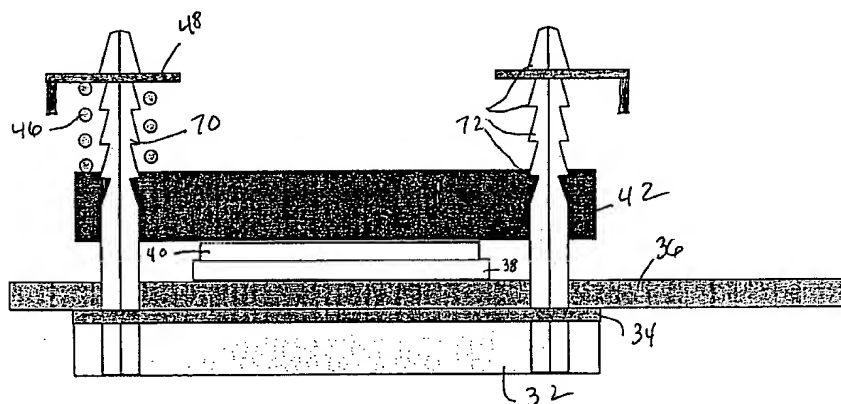


FIG. 8

With reference to Figure 8, exemplary claim 1 defines a component restraint system that is used to secure an electronic component (40) to a circuit board (36) comprising: a backing plate (32); a post (70) extending from said backing plate (32), said post having a plurality of stop surfaces (bottom side of extensions 72, see also Figure 4, element 56); a spring (46) radially disposed around said post; and a clip (48) which, when inserted onto said post, engages a stop surface of said post and compresses said spring. The plurality of stop surfaces permit the spring to be variably compressed.

## VI. ISSUES

Whether all the pending claims are rendered obvious by Applicants' Background section in view of *Lin* (U.S. Patent No. 6,412,546).

## VII. GROUPING OF THE CLAIMS

Claims 1-9, 11-13 and 20-24 stand together.

Claims 25-27 stand together.

Claims 28-30 stand together.

The groupings above are for purposes of this appeal only. The groupings should not be construed to mean the patentability of any of the claims may be determined (e.g., in later actions before a court) based on the groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each claim individually.

## VIII. ARGUMENT

### A. Claims 1-9, 11-13 and 20

#### 1. The Art Does Not Teach or Suggest the Claimed Elements.

Claim 1 is representative of the claims in the first grouping. Claim 1 recites "a post extending from said backing plate, **said post having a plurality of stop surfaces...**" (emphasis added). Figure 8 above shows exemplary embodiments where posts (70) have a plurality of stop surfaces. Applicants' related art Figure 1 does not show a post having a plurality of stop surfaces. *Lin* does not show a post having a plurality of stop surfaces. Thus, neither *Lin* nor Applicants' Background section, alone or in combination, teach or fairly suggest a post having a plurality of stop surfaces.

Claim 1 also recites "**wherein said plurality of stop surfaces permits said spring to be variably compressed.**" As shown in Figure 8, for example, clips (48) can be selectively positioned along the posts (70) to permit the spring (46) to be variably compressed. Applicants' related art Figure 1 does not show a system where a plurality of stop surfaces permit variably compressing the spring. Likewise, *Lin* does not show variably compressing a spring. Thus, neither Applicants' Background section nor *Lin*, alone or in combination, teach or fairly suggest a plurality of stop surfaces that permit variably compressing the spring.

2. The Modification and Combinations to the Art are Not Proper.

In forming the rejections in the Final Office Action of December 11, 2003, the *Lin* reference is modified to contain a plurality of stop surfaces on the *Lin* post, without textual support for the modification.

The mere fact that the prior art may be modified in a manner suggested by the Examiner does not make the modification obvious **unless the prior art suggested the desirability of the modification.**

*In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) (emphasis added). *Lin* does not teach or fairly suggest the desirability of modifying *Lin*'s posts 66 to comprise plurality of stop surfaces. Thus, the modification is improper.

The improperly modified *Lin* reference is then combined with Applicants' Background section, without textual support in either reference for the combination. In this matter, *In re Fritch* provides further guidance:

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. **Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so.**

*Id.* (italics original, bold added). Neither Applicants' Background section nor *Lin* provide suggestion or incentive for their combination.

After improperly combining Applicants' Background section and the *Lin* the reference, the Final Office Action states, "it is deemed inherent that the combination's plurality of stop surfaces would permit the spring to be variably compressed." Final Office Action dated December 11, 2003, page 3. Applicants respectfully submit that use of inherency in this context is improper. With regard to inherency, the MPEP states that "[t]he express, implicit, and inherent disclosure **of a prior art reference** may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103." MPEP 2112 (emphasis added).

To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter **is necessarily present in the thing described in the reference**, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be

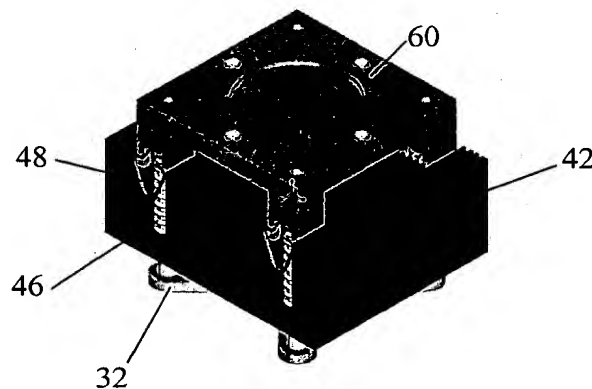
established by probabilities or possibilities. The mere fact that the certain thing may result from a given set of circumstances is not sufficient.

*Id.* (citing *In re Robertson*, 169 F.3d 743,745 (Fed. Cir. 1999)) (emphasis added).

Applicants respectfully submit that the alleged inherent property is not "present in the thing described in the reference." How can there be an inherent property in the *Lin* disclosure of a structure that is not present? Applicants respectfully submit that *Lin* fails to "make clear that the missing descriptive matter is necessarily present in the thing described."

**B. Claims 28-30.**

Claim 28 is representative of the claims of this grouping. Claim 28 recites **"an assembly plate holding a plurality of clips ... wherein each of the plurality of clips are inserted one each onto the plurality of posts by placing the assembly plate over the plurality of posts and compressing the springs"** (Emphasis added). The picture of Applicants' Figure 6 illustrates exemplary embodiments, and is reproduced below.



Thus, the picture of Figure 6 illustrates an assembly plate (60) holding a plurality of clips (48, only two visible), and wherein the clips are inserted onto a plurality of posts by placing the assembly plate over the plurality of posts and compressing springs (46). Applicants' Background section, alone or in combination with *Lin*, does not teach or fairly suggest the claimed assembly plate. In fact, there is no

citation in the Final Office Action to either Applicants' Background section or *Lin* that supports a teaching of an assembly plate as required by claims 28-30.

**C. Claims 25 – 27**

Claim 25 is representative of the claims of this grouping. Claim 25 recites **"compressing, substantially simultaneously, a plurality of springs..."** (Emphasis added). The assembly plate (60) of the picture of Figure 6 above is an exemplary structure that could be used to implement a method of substantially simultaneously compressing the springs. Applicants' Background section, alone or in combination with *Lin*, does not teach or fairly suggest substantially simultaneously compressing springs. In fact, there is no citation in the Final Office Action to either Applicants' Background section or *Lin* that supports a teaching of substantially simultaneously compressing springs.

Claim 25 also recites **"locking, substantially simultaneously, a plurality of clips on a plurality of posts..."** (Emphasis added). The assembly plate (60) of the picture of Figure 6 above is an exemplary structure that could be used to implement a method of substantially simultaneously locking a plurality of clips on a plurality of posts. Applicants' Background section, alone or in combination with *Lin*, does not teach or fairly suggest substantially simultaneously locking a plurality of clips on a plurality of posts. In fact, there is no citation in the Final Office Action to either Applicants' Background section or *Lin* that supports a teaching of substantially simultaneously locking a plurality of clips.

**IX. CONCLUSION.**

Applicants respectfully request that the rejections in the Final Office Action dated December 11, 2003 be reversed, and the case set for issue.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may

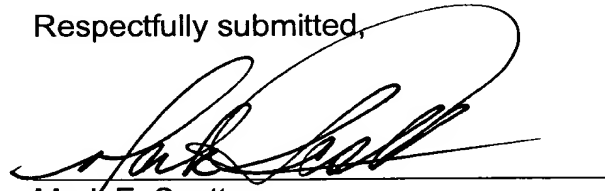
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be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees or time extensions are inadvertently omitted or if any fees have been overpaid, please appropriately charge or credit those fees to Hewlett-Packard Company Deposit Account Number 08-2025 and enter any time extension(s) necessary to prevent this case from being abandoned.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark E. Scott', is written over a horizontal line.

Mark E. Scott  
PTO Reg. No. 43,100  
CONLEY ROSE, P.C.  
(713) 238-8000 (Phone)  
(713) 238-8008 (Fax)  
ATTORNEY FOR APPLICANTS

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
Legal Dept., M/S 35  
P.O. Box 272400  
Fort Collins, CO 80527-2400

**APPENDIX**  
**PENDING CLAIMS**

1. (Previously presented) A component restraint system that is used to secure an electronic component to a circuit board, comprising:
  - a backing plate;
  - a post extending from said backing plate, said post having a plurality of stop surfaces;
  - a spring radially disposed around said post; and
  - a clip which, when inserted onto said post, engages a stop surface of said post and compresses said spring,wherein said plurality of stop surfaces permits said spring to be variably compressed.
2. (Original) The restraint system of claim 1 further including a plurality of posts protruding from said backing plate, each post having a clip and a spring disposed thereon.
3. (Original) The restraint system of claim 1 further including four posts protruding from said backing plate and including stop surfaces, each post having a clip and a spring disposed thereon.
4. (Original) The restraint system of claim 2 wherein each post has an upper end distal from said backing plate and the clip for each post is pushed down over the upper end until the clips engage the stop surfaces of the posts.
5. (Original) The restraint system of claim 4 wherein said electronic component and circuit board are disposed between said backing plate and said springs and, as said springs are compressed by said clips, said electronic component is secured to said circuit board.



6. (Original) The restraint system of claim 5 further including heat sink also disposed between said backing plate and said springs, said heat sink further disposed between said electronic component and said springs.

7. (Previously presented) The restraint system of claim 4 wherein said upper ends of said posts comprise tips formed between the distal end of the post and the stop surfaces, each tip having a smaller cross section at its distal end than at the stop surfaces.

8. (Original) The restraint system of claim 4 wherein said upper ends of said posts are substantially conically shaped.

9. (Previously presented) The restraint system of claim 1 wherein said clip includes protruding members which define a hole in which said post is inserted, said protruding members are pushed apart as said clip is pushed along said post towards a stop surface.

10. (Canceled).

11. (Previously presented) An electronic assembly, comprising:  
a circuit board;  
a backing plate;  
a plurality of springs;  
a plurality of posts extending from said backing plate through said circuit board and said springs;  
an electronic component and heat sink sandwiched between said circuit board and said springs; and  
a plurality of clips, one clip per post;  
wherein each clip engages one of the posts in one of a plurality of different positions to compress one of said springs to one of a plurality of different compressive forces.

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12. (Previously presented) The circuit board of claim 11 wherein each clip engages said post in three different positions.

13. (Previously presented) The circuit board of claim 11 in which each clip can compress one of said springs to three different positions on said post.

14.-19. (Canceled).

20. (Previously presented) A computer system, comprising:  
a processor and heat sink;  
an output device coupled to said processor;  
a circuit board;  
a backing plate;  
a plurality of springs;  
a plurality of posts extending from said backing plate through said circuit board and said springs;  
said processor and heat sink disposed between said circuit board and said springs; and  
a plurality of clips, one clip per post;  
wherein each of said clips has clip members that are pushed apart to engage the posts in a plurality of different positions to variably compress the springs.

21. (Previously presented) The computer system of claim 20 wherein in each of said clips, a portion of the clip is bent downward.

22. (Previously presented) The computer system of claim 21 wherein said portion of said clip that is bent downward limits the rotational movement of said clip relative to said post.

23. (Previously presented) The computer system of claim 20 wherein said clip is fabricated from metal.

24. (Previously presented) The computer system of claim 20 wherein upon removal of said clip from said post, said clip members return to an initial position.

25. (Previously presented) A method comprising:  
compressing, substantially simultaneously, a plurality of springs that bias an electronic component into an interposer socket; and  
locking, substantially simultaneously, a plurality of clips on a plurality of posts telescoped one each within the plurality of springs, the plurality of clips hold the plurality of springs in compression.

26. (Previously presented) The method as defined in claim 25 wherein compressing further comprises pressing an assembly plate, holding the plurality of clips, onto the plurality springs.

27. (Previously presented) The method as defined in claim 25 further comprising removing the assembly plate and leaving the plurality of clips locked to the plurality of posts.

28. (Previously presented) A system comprising:  
a backing plate defining a plane, the backing plate having a plurality of posts extending substantially perpendicular from the backing plate and each post having a stop surface;  
a circuit board having a plurality of apertures through which the plurality of posts extend;  
an interposer socket on the circuit board within the apertures;  
a plurality of springs radially disposed around each of the plurality of posts;  
an electronic component in operational relationship to the interposer socket and biased toward the interposer socket by the springs;

an assembly plate holding a plurality of clips;  
wherein each of the plurality of clips are inserted one each onto the plurality of posts by placing the assembly plate over the plurality of posts and compressing the springs; and  
wherein the plurality of clips lock one each into the stop surfaces of the posts, holding the springs in compression.

29. (Previously presented) The system as defined in claim 28 wherein assembly plate is removed leaving the clips locked to their respective posts.

30. (Previously presented) The system as defined in claim 28 further comprising said posts having a plurality of stop surfaces, and wherein the amount of compression of the springs is selectively set by the stop surfaces to which the clips lock.